Variability of Languages in Time and Space

Lecture VI
Morphology

• Distinguishing word classes
• Structural typology
• Typology of grammatical categories: Epistemic possibility, Evidentiality, Determination, Head-marking, Number
• Typology of grammatical categories: Case
• Differential object and place markers

Anja Nedoluzhko
Typology in Morphology

• Structural typology
  – How grammatical meanings are built in languages

• Typology of grammatical categories and meanings
  – Which grammatical meanings are possible
  – Which realizations they have in different languages

• Conversely, morphological typology receives relatively little attention
  – Of all the aspects of language, morphology is the most language-specific \(\rightarrow\) least generalizable
  – Word classes are language-specific
  – Even the very presence of a meaningful morphological component is language-specific
Word Classes (POS)

• An integral part of grammar since the Greek/Latin tradition.
  – Dionysios Thrax (217–145 BC) presents and defines eight parts of speech
  – Terms such as ‘noun’ or ‘verb’ are rooted in this tradition
• Define them in a way that fits into the present-day knowledge about the range of cross-linguistic variation
  – Work in progress, no final solution appearing on the horizon
Word Classes (POS)

- nouns
- verbs
- adjectives
- adverbs

\[\text{open word classes}\]

Cross-linguistically valid criteria for distinguishing word classes can be applied

- pronouns (personal, possessive, reflexive, reciprocal, demonstrative, relative, interrogative, indefinite)
- articles
- adpositions
- conjunctions
- numerals
- classifiers (with their different subtypes)
- interjections
Most approaches to word classes are based on semantic criteria like object, property, or action.

Notional description of nouns and verbs:
- A verb is [...] ‘a temporal’ predication in the sense of following a situation, state by state, as it evolves through conceived time (Langacker 1987: 74)
- A noun designates a set of interconnected entities

Does not provide a discovery procedure for POS identification.

Semantic criteria are too general to match word classes across languages.
Distinction between nouns and verbs is related to discourse function

- Characteristic features of prototypical N's and V's are [...] derivative of (and perhaps even secondary to) their discourse roles’ (Hopper and Thompson 1984: 708)

Nouns (referents)
- Introduce participants and properties and deploy them

Verbs (predicates)
- Assert the occurrence of an event
- An answer to the question ‘What happened?’
POS: Criteria for Distinguishing

- Inflectional morphology
- Derivational morphology
- Syntactic distribution
- Phonological form
  - Distinct word classes take phonologically different forms whose structure cannot be characterized in a general way (e.g. English *speech* vs. *speak* or *die* vs. *death*)
  - Lexemes within each class have different phonological properties (e.g. nouns are monosyllabic, verbs are disyllabic)

<table>
<thead>
<tr>
<th>semantic</th>
<th>pragmatic/discourse</th>
<th>formal</th>
<th>lexical vs. syntactic</th>
</tr>
</thead>
</table>

*function-indicating morphosyntax*
POS: Criteria for Distinguishing

  - The confusion of the lexical (paradigmatic) and the syntactic (syntagmatic) levels as a problem for an adequate distinction of word classes
  - Erroneous belief that languages universally display a perfect X:XP match (where X is a “lexical”, XP a “phrasal” category)
Universality of the Distinction

• The difference between denotational and non-denotational words seems to be universal
  – But there are languages with no noun/verb distinction (Sasse 1993)

<table>
<thead>
<tr>
<th>øi-quiv-cua</th>
<th>in</th>
<th>øi-piltōntli</th>
<th>in</th>
<th>øj-nacatl</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘S/he eats it.’</td>
<td>‘It is a child.’</td>
<td>‘It is meat.’</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Other Word Classes

• Adjectives
  – Property-denoting lexemes in the function of modification,
  – Often specified for degree
  – There are languages without adjectives (Chinese $\rightarrow v$, Quechua $\rightarrow n$)

• Adverbs
  – Modifiers of constituents other than nouns (mostly verbs and adjectives, with some exceptions)
    • very fast, extremely clever but also during his stay here
  – Much more heterogeneous class
  – Traditionally sub-classified into four semantic groups: local, temporal, modal or manner, and causal
References to POS classification

Structural Typology

- How grammatical meanings are built in languages
- Approach to structural typology
  - holistic approach: global characterization of the entire language according to a small number of typological characteristics.
    - too ambitious,
  - partial typology:
    - moving away from classifying languages into ideal types
    - specific phenomena or individual grammatical constructions are studied
- Distribution of structures in the world
  - What’s where why?
Parameters of Variation

• Stems and Affixes
  – What combinations of stems and affixes are possible in a language?

• Separatist vs. cumulative affixes
  – Does an affix have one or more meaning at the same time?

• The form of morphemes
  – Segmental morpheme, operations (e.g. reduplication), suprasegmentals

• Monosemous vs. polysemous affixes

• Invariance vs. variance of affixes
  – Declination classes

• Overt vs. zero affixes
  – What kind of affixes have overt forms and what kinds are zero?

• The order of morphemes
  – e.g. stem – deriv – number – case
<table>
<thead>
<tr>
<th></th>
<th>SINGULAR</th>
<th></th>
<th>PLURAL</th>
<th></th>
<th></th>
<th>German</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>SINGULAR</td>
<td>PLURAL</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
<td>NEUT</td>
<td>MASC</td>
<td>FEM</td>
<td>NEUT</td>
</tr>
<tr>
<td>NOM</td>
<td>der</td>
<td>die</td>
<td>das</td>
<td>die</td>
<td>die</td>
<td>die</td>
</tr>
<tr>
<td>ACC</td>
<td>den</td>
<td>die</td>
<td>das</td>
<td>die</td>
<td>die</td>
<td>die</td>
</tr>
<tr>
<td>GEN</td>
<td>des</td>
<td>der</td>
<td>des</td>
<td>der</td>
<td>der</td>
<td>der</td>
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<tr>
<td>DAT</td>
<td>dem</td>
<td>der</td>
<td>dem</td>
<td>den</td>
<td>den</td>
<td>den</td>
</tr>
</tbody>
</table>

- **Monosemous vs. polysemous affixes**
- **Invariance vs. variance of affixes**
- **Overt vs. zero affixes**

<table>
<thead>
<tr>
<th></th>
<th>‘woman’</th>
<th>‘student’</th>
<th>‘money’</th>
<th>Serbo-Croatian</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOMINATIVE:</td>
<td>žen-a</td>
<td>student-0</td>
<td>nòvac-0</td>
<td></td>
</tr>
<tr>
<td>ACCUSATIVE:</td>
<td>žen-u</td>
<td>student-a</td>
<td>nòvac-0</td>
<td></td>
</tr>
<tr>
<td>GENITIVE:</td>
<td>žen-e</td>
<td>student-a</td>
<td>nòvc-a</td>
<td></td>
</tr>
<tr>
<td>DATIVE:</td>
<td>žen-i</td>
<td>student-u</td>
<td>nòvc-u</td>
<td></td>
</tr>
<tr>
<td>INSTRUMENTAL:</td>
<td>žen-om</td>
<td>student-om</td>
<td>nòvc-em</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>‘cupboard’</th>
<th>‘Matti’</th>
<th>‘school’</th>
<th>Finnish</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOMINATIVE:</td>
<td>kaappi-0</td>
<td>Matti-0</td>
<td>koulu-0</td>
<td></td>
</tr>
<tr>
<td>GENITIVE: ('of')</td>
<td>kaapi-n</td>
<td>Mati-n</td>
<td>koulu-n</td>
<td></td>
</tr>
<tr>
<td>ELATIVE: ('from')</td>
<td>kaapi-sta</td>
<td>Mati-sta</td>
<td>koulu-sta</td>
<td></td>
</tr>
<tr>
<td>ADESSIVE: ('at')</td>
<td>kaapi-lla</td>
<td>Mati-lla</td>
<td>koulu-lla</td>
<td></td>
</tr>
<tr>
<td>INESSIVE: ('in')</td>
<td>kaapi-ssa</td>
<td>Mati-ssa</td>
<td>koulu-ssa</td>
<td></td>
</tr>
</tbody>
</table>

- **Latin:**
- **Southern Barasano:**
- **Swahili:**
- **Mandarin:**

<table>
<thead>
<tr>
<th>Latin:</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>uxor</td>
<td>‘wife’</td>
<td>uxor-es</td>
<td>‘wives’</td>
</tr>
<tr>
<td>Southern Barasano:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>kahe-a</td>
<td>‘eye’</td>
<td>kahe</td>
<td>‘eyes’</td>
</tr>
<tr>
<td>Swahili:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ki-su</td>
<td>‘knife’</td>
<td>vi-su</td>
<td>‘knives’</td>
</tr>
<tr>
<td>Mandarin:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ren</td>
<td>‘man’</td>
<td>ren</td>
<td>‘men’</td>
</tr>
</tbody>
</table>

Moravcsik (2013)
Agglutinating morphology

- A word may consist of more than one morpheme
- The boundaries between morphemes in the word are always clear-cut

<table>
<thead>
<tr>
<th>Case</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominative</td>
<td>adam</td>
<td>adam-lar</td>
</tr>
<tr>
<td>Accusative</td>
<td>adam-i</td>
<td>adam-lar-i</td>
</tr>
<tr>
<td>Genitive</td>
<td>adam-in</td>
<td>adam-lar-in</td>
</tr>
<tr>
<td>Dative</td>
<td>adam-a</td>
<td>adam-lar-a</td>
</tr>
<tr>
<td>Locative</td>
<td>adam-da</td>
<td>adam-lar-da</td>
</tr>
<tr>
<td>Ablative</td>
<td>adam-dam</td>
<td>adam-lar-dam</td>
</tr>
</tbody>
</table>

- Frequent in Turkish, Indonesian, Eskimo, Hungarian, Japanese, Basque...
(flective, inflective)

**Fusional morphology**

- no clear-cut boundaries between morphemes
- alternations

• the expression of different categories within the same word is fused together to give a single unsegmentable morph

**Marie**  
*sp-í*  
‘Mary’  
‘sleep’ – 3.pers.+SG+present  
‘Mary is sleeping.’

• restrictions to morpheme combinations

**Czech**

*ruk*-a ‘hand’

*ruc*-e ‘hand’  
*(N.Pl, Lok&Dat. Sg)*

*ruč*-n-í ‘hand’ (adj.)

*přátel-é*  
‘friends’

*polic*-i  
‘politicians’

*vítěz-ové*  
‘winners’

Nom+Plural
Isolating and Analytical morphology

- Grammatical meanings are expressed with function words
  - One word – one morpheme
- More of isolation → Less of morphology
- Very important word order
- Many compound words

Vietnamese

Khi tôi đến nhà bạn tôi, chúng tôi bắt đầu làm bài.

when I come house friend I plural I begin I do lesson

“When I came to my friend’s house, we began to do lessons.”
Analytical vs. Fusional morphology

**Classical Chinese**

<table>
<thead>
<tr>
<th>明天</th>
<th>我</th>
<th>的</th>
<th>朋友</th>
<th>会</th>
<th>爲</th>
<th>我</th>
<th>做</th>
<th>一</th>
<th>個</th>
<th>生日</th>
<th>蛋糕</th>
</tr>
</thead>
<tbody>
<tr>
<td>mìngtiān</td>
<td>wǒ</td>
<td>de</td>
<td>péngyou</td>
<td>huì</td>
<td>wèi</td>
<td>wǒ</td>
<td>zuò</td>
<td>yī</td>
<td>ge</td>
<td>shēngrì</td>
<td>dàn'gāo</td>
</tr>
</tbody>
</table>

**EN.** The dog of **my father** is barking.

- def.
- Gen.
- poss.
- praes. actual

**CZ.** Tatínkův pes štěká.

- farther+poss
- dog+NomSg
- bark+praes.

Tomorrow my friend (my friends) will make me a birthday cake.
Polysynthetic morphology

• Lexical morphemes are combined together into a single word
• Words are composed of many morphemes that have independent meaning
• Long "sentence-words”
• High morpheme-to-word ratio
• Morpheme and word boundaries are not clear cut
• Subject may be separated, but the rest stays very close
Polysynthetic morphology

In Paleosiberian Eskimo-Aleut languages:

**Chukchi**

`tameŋəlevtəpaytərkən`

`tə|meyŋə|levtə|pəyt|ərkən`

1.SG -‘big’-‘head’-‘ache’-IMPF
‘I have a fierce headache’

**Yupik**

tuntussuqataraknsaitengqiggtuq

‘He had not yet said again that he was going to hunt reindeer.’

**Greenlandic**

Aliikusersuillammassuaanerartassagaluarpalii.
aliku-ser-su-i-Illammas-su-a-nesar-ta-ssa-galuarpal-li
entertainment-provide-SEMITRANS-one.good.at-COP-say.that-
REP-FUT-sure.but-3.PL.SUBLJ/3SG.OBJ-but

'However, they will say that he is a great entertainer, but …'
Turkish – Latin – English

Given Turkish word forms and their translations into Latin and English

<table>
<thead>
<tr>
<th>Turkish</th>
<th>Latin</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>yazmışım</td>
<td>scribo</td>
<td>I’ve probably written</td>
</tr>
<tr>
<td>yazmıssın</td>
<td>(he)</td>
<td>You है have probably written</td>
</tr>
<tr>
<td>yazmış</td>
<td>(they)</td>
<td>He has probably written</td>
</tr>
<tr>
<td>yazmısınız</td>
<td>(he)</td>
<td>You है have probably written</td>
</tr>
<tr>
<td>yazar</td>
<td>(he)</td>
<td>(he) writes</td>
</tr>
<tr>
<td>yazarlar</td>
<td>(they)</td>
<td>(they) write</td>
</tr>
</tbody>
</table>

Translate:

- into Turkish: scribo, They have probably written
- into Latin: (he) writes, yazarsınız
- into English: scribitis, yazmışlar

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>çalışırmı</td>
<td>laboro</td>
<td></td>
</tr>
<tr>
<td>çalışır</td>
<td>laborat</td>
<td></td>
</tr>
<tr>
<td>çalışırsın</td>
<td>laboras</td>
<td></td>
</tr>
<tr>
<td>çalışırsınız</td>
<td>laborant</td>
<td></td>
</tr>
<tr>
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<td>laboratis</td>
<td></td>
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<td>yazarsın</td>
<td>scribis</td>
<td></td>
</tr>
</tbody>
</table>
Typology of grammar

• Not universal, but many categories are present in a big number of languages

• Verbs
  – temporal categories, aspect, modality, epistemic possibility, evidentiality, causality, (gender)

• Nouns
  – syntactic meanings (agreement classes, case, head-marking)
  – semantic meanings (number, determination, possessivity)
Epistemic Possibility

- The language can express epistemic possibility with verbal constructions: 65
- The language cannot express epistemic possibility with verbal constructions, but with affixes on verbs: 84
- The language cannot express epistemic possibility with verbal constructions or with affixes on verbs, but with other kinds of markers: 91

Total: 240
Evidentiality

• In Turkish: a distinction is made between witnessed past (the morpheme -di ) and unwitnessed (-miş )

(8) Turkish

a. Ahmet gel-di.
   Ahmet come-PST.DIR.EVD
   ‘Ahmet came.’ (witnessed by the speaker)

b. Ahmet gel-miş
   Ahmet come-PST.INDIR.EVD
   ‘Ahmet came.’ (unwitnessed by the speaker)

• evidential-type information through modal verbs
  in germanic languages - Dutch: zouden, Danish: skalje, German: sollen

• Maps in WALS https://wals.info/feature/78A#2/16.6/149.8
Determination

• Abstract meaning (words in dictionary, lists) → Realization in text
  – By noun phrases: Specific and non-specific NPs
  – By specific NPs: Definite and indefinite NPs
  – By definite NPs: Textual and situational definiteness (e.g. some Frisian and German dialects have distinct markers for textual and situational definiteness)

• The meaning of definiteness seems to be universal, but not the grammaticalisation
  – Articles
# Determination and Referentiality

<table>
<thead>
<tr>
<th><strong>Marking referentiality</strong></th>
<th><strong>Marking definiteness</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; languages (Turkic, Iranian, many African)</td>
<td>&lt; languages (west-European)</td>
</tr>
<tr>
<td>The meaning must not be expressed by extra morphemes, may be reflected in grammar (e.g. case and number may be expressed only by referential nouns)</td>
<td>• both specific and non-specific NPs are classified according to definiteness, without non-specifics being classified into a special group.</td>
</tr>
<tr>
<td>• often expressed by clitics → not always grammaticalized</td>
<td></td>
</tr>
</tbody>
</table>

**Bantu > Bemba**: indefinite prefix of class&number marker:

| i-ci-tabo - ‘a book, non-specific’ |
| ci-tabo - ‘specific, definite or indefinite book’ |

**English**:

| A teacher should be patient. vs. The telephone was invented by Alexander Bell. vs. Ø Gentleman should never insult Ø woman. |
| German: Das Auto ist des Deutschen liebtestes Kind. vs. Die Heuschrecke ist ein Insekt. |

<table>
<thead>
<tr>
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<th><strong>Marking definiteness</strong></th>
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<td>• often expressed by clitics → not always grammaticalized</td>
<td></td>
</tr>
</tbody>
</table>
Head-marking (Ezāfe)

• Other strategy of dependency marking (vs. case, e.g. dům otce, otcův dům, velký dům)
• Typical for Iranian, Turkish, Semitic, Fino-Ugric, etc. languages

a. sänduq-e doxtär 'girl’s (suit)case’
case - izf girl

b. sänduq-e män ‘my (suit)case’
case - izf I

c. sänduq-e qäšäng ‘nice (suit)case’
case - izf nice

d. sänduq-e qäšäng-e doxtär ‘girl’s nice (suitcase)’
case - izf nice - izf girl

e. sänduq-e doxtär-e qäšäng ‘nice girl’s (suit)case’
case - izf girl- izf nice
Number

• Grammatical category of nouns, pronouns, adjectives, and verb agreement
• Expresses count distinctions
• Most often: singular vs. plural, but there are also
  – *dual*, (Lithuanian, Arabic, Maltese, Icelandic, Old Church Slavonic, Slovenian, Sorbian)
  – *trial* (Tok Pisin, Tolomako Lihir) (Papua New Guinea)
  – *paucal* number (old Arabic, some languages of Papua New Guinea)
• Very rare úplně numerical uncertainty system
  – one – more than one – indefinite number in some ) : některé African languages
Expression of Nominal Plurality
## Expression of Nominal Plurality

### Reduplication

<table>
<thead>
<tr>
<th>Hawaiian</th>
<th>Indonesian</th>
</tr>
</thead>
<tbody>
<tr>
<td>rumah</td>
<td>rumah-rumah</td>
</tr>
<tr>
<td>‘house’</td>
<td>‘houses’</td>
</tr>
<tr>
<td>perubahan</td>
<td>perubahan-perubahan</td>
</tr>
<tr>
<td>‘change’</td>
<td>‘changes’</td>
</tr>
</tbody>
</table>

### Special word

<table>
<thead>
<tr>
<th>Hawaiian</th>
<th>Oceanic Group of Australian Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘elua a’u mau i’a</td>
<td>‘my two fishes’</td>
</tr>
</tbody>
</table>

### Tones

<table>
<thead>
<tr>
<th>Indonesian</th>
<th>ngiti (Sudan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>kamà</td>
<td>‘chief’</td>
</tr>
<tr>
<td>màlàyikà</td>
<td>‘angels’</td>
</tr>
<tr>
<td>màlimò</td>
<td>‘teachers’</td>
</tr>
<tr>
<td>adòdu</td>
<td>‘my brothers’</td>
</tr>
</tbody>
</table>

### Prefixation

<table>
<thead>
<tr>
<th>Anindilyakwa</th>
<th>Maricopa, USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>wirr-iikwayyiwa</td>
<td>‘children’</td>
</tr>
<tr>
<td>pl-child</td>
<td></td>
</tr>
</tbody>
</table>

### Change in the root

<table>
<thead>
<tr>
<th>Anindilyakwa</th>
<th>Maricopa, USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>humar</td>
<td>‘children’</td>
</tr>
<tr>
<td>nchen</td>
<td>‘older siblings’</td>
</tr>
<tr>
<td>hat</td>
<td>‘dogs’</td>
</tr>
<tr>
<td>mhay</td>
<td>‘boys’</td>
</tr>
</tbody>
</table>

### Change in the root (North Australia)

<table>
<thead>
<tr>
<th>Maricopa, USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>humaar</td>
</tr>
<tr>
<td>nchiin</td>
</tr>
<tr>
<td>haat</td>
</tr>
<tr>
<td>mhaa</td>
</tr>
</tbody>
</table>
Nominal Cases

• Syntactic: express grammatical relations (subject, object, oblique...)
  – Subject (≈ ACTor in PDT)
  – Object (≈ PATiens in PDT)
  – Indirect Object, oblique (≈ ADDRessee in PDT)
  – Other (≈ ORIG, EFF in PDT, Instrument)

• Semantic (Thematic roles, Semantic roles)
  – Ch. Fillmore (1968, 1971)
  – Express conceptual notions (agent, patient, instrument...)
  – Example: If someone named John purposely hits someone named Bill, then John is the agent and Bill is the patient of the hitting event.
    • John hit Bill.
    • Bill was hit by John.  
      In both of sentences, John is the agent.
### Semantic Roles

- Semantic roles do not correspond directly to grammatical relations.
- Notice what varying semantic roles a subject can play:

<table>
<thead>
<tr>
<th>Sentence</th>
<th>Grammatical relation</th>
<th>Semantic role</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Bob</em> opened the door with a key.*</td>
<td><em>Bob</em> = SUBJECT</td>
<td><em>Bob</em> = AGENT</td>
</tr>
<tr>
<td><em>The key</em> opened the door.</td>
<td><em>The key</em> = SUBJECT</td>
<td><em>The key</em> = INSTRUMENT</td>
</tr>
<tr>
<td><em>The door</em> opened.</td>
<td><em>The door</em> = SUBJECT</td>
<td><em>The door</em> = PATIENT</td>
</tr>
</tbody>
</table>
Examples of Semantic Roles

- **Agent**: The ‘doer’ of the action denoted by the predicate
- **Patient**: The ‘undergoer’ of the action or event
- **Experiencer**: The living entity that experiences the action or event
- **Goal**: The location or entity in the direction of which something moves
- **Benefactive**: The entity that benefits from the action or event (*John helped Susan to buy her first car*)
- **Causer**: The referent which instigates an event rather than actually doing it (*The rain destroyed the crops*)
- **Source**: The location or entity from which something moves
- **Instrument**: The medium by which the action or event is carried out
- **Locative**: The specification of the place
- **Recipient**: Argument that receives something (*I paid my landlord the rent*)
Semantic Roles: Patient

- Also known as affected, undergoer
- The entity undergoing a change of state or location, or which is possessed, acquired or exchanged, a person who experiences an event, the thing or person that is affected by an event
  - The entity predicated with a state or location:
    - *The door is open.*
    - *John is at home.*
  - The entity undergoing a change of state or location:
    - *He opened the door.*
    - *The door swung open.*
    - *He threw the ball across the yard.*
    - *The ball rolled off the table.*
  - The entity which is possessed, acquired, or exchanged:
    - *John has a new book.*
    - *John bought a new book.*
    - *John gave Mary a new book.*
Benefactive, Recipient, Addressee: Syntactic and Semantic Realization

- Languages use grammatical case markers to distinguish semantic roles.
- Many roles vs. not so many grammatical markers for cases → roles are combined.
- Example: Semantic roles Benefactive, Recipient and Addressee are mostly combined and use Dative, BUT
  - in Sanskrit Accusative is used for the Addressee and Dative is used for Benefactive and Recipient.
  - in Dravidian languages: there is a special case for Benefactive, while Recipient + Addressee + Patient get Accusative.
Semantic Roles: Comitative

Relationship of "accompaniment": "in company with", "together with"

*John washed the car with Mary.*

**Estonian**

<table>
<thead>
<tr>
<th>ja</th>
<th>Barber</th>
<th>rüüpa-b</th>
<th>koos</th>
<th>Balthasari-ga</th>
<th>sügava</th>
<th>sõõmu</th>
</tr>
</thead>
<tbody>
<tr>
<td>and</td>
<td>Barber</td>
<td>drink-3.sg</td>
<td>together</td>
<td>Balthasar-COM</td>
<td>deep GEN</td>
<td>mouthful GEN</td>
</tr>
</tbody>
</table>

*And Barber takes a sip together with Balthasar.*

**Hungarian**

<table>
<thead>
<tr>
<th>a'achek</th>
<th>нытоскычат-гъэ</th>
<th>га-мэлгар-ма</th>
</tr>
</thead>
<tbody>
<tr>
<td>boy</td>
<td>ran.out-PERF</td>
<td>COM.PRED-gun-COM.PRED</td>
</tr>
</tbody>
</table>

*I was lying in bed with my clothes and shoes on.*

**Chukchi**

<table>
<thead>
<tr>
<th>ruhá-stul</th>
<th>és</th>
<th>cipő-stül</th>
<th>fekűd-t-em</th>
<th>az</th>
<th>ágy-ban</th>
</tr>
</thead>
<tbody>
<tr>
<td>clothes-COM</td>
<td>and</td>
<td>shoe-COM</td>
<td>lie-PAST-INDEF.1.SG</td>
<td>the</td>
<td>bed-INE</td>
</tr>
</tbody>
</table>

*I was lying in bed with my clothes and shoes on.*

*The boy ran out with a gun*
Semantic Roles: Abessive
(caritive and privative)

- The lack or absence of the marked noun
  *John washed the car without Mary.*
- Especially used in Uralic languages

**Finnish**
- *raha* "money"
- *rahatta* "without money"
- *ilman rahaa* "without money"

**Hungarian**
- *pénz* "money"
- *pénztelen* "without money"
- *haza* "home(land)"
- *hazátlan* "(one) without a homeland"
# Locative Cases

<table>
<thead>
<tr>
<th>Basic Localization</th>
<th>Case</th>
<th>Some combinations in Hungarian</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN – inside</td>
<td>LOKATIVE=ESSIV E (where, LOC)</td>
<td>Inessive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Elative</td>
</tr>
<tr>
<td>APUD – near</td>
<td></td>
<td>Illative</td>
</tr>
<tr>
<td>SUB – under</td>
<td>ABLATIVE=ELATIVE (from where, DIR1)</td>
<td>Superessive</td>
</tr>
<tr>
<td>SUPER – over</td>
<td></td>
<td>Delative</td>
</tr>
<tr>
<td>POST – behind</td>
<td></td>
<td>Sublative</td>
</tr>
<tr>
<td>AD – on surface</td>
<td>LATIVE=DIREKTIVE (to where, DIR3)</td>
<td>Adessive</td>
</tr>
<tr>
<td>CIRKUM – around</td>
<td></td>
<td>Ablative</td>
</tr>
<tr>
<td>ULTRA – far from</td>
<td></td>
<td>Allative</td>
</tr>
</tbody>
</table>
Given Alutor words and their English translations:

- **kujnətenək**: near to the glass
- **raralqək**: on the roof
- **rarayiŋən**: into the basement
- **aŋqəkin**: from the sea
- **aŋqən**: the sea
- **keŋən**: the bear
- **keŋəlqəkin**: from the bear
- **raralqən**: the roof
- **kujnən**: into the glass
- **keŋək**: inside the bear
- **aŋqətənək**: on the beach

**Translate into Alutor:**

the basement, inside the house, the glass, from the roof, to the bear
### Old French (roy - ‘king’)

<table>
<thead>
<tr>
<th>Case</th>
<th>Direct</th>
<th>Oblique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominative</td>
<td>roy-s</td>
<td>roy-0</td>
</tr>
<tr>
<td>Accusative</td>
<td>roy-s</td>
<td>roy-0</td>
</tr>
</tbody>
</table>

### Hungarian (hajó - ‘ship’)

<table>
<thead>
<tr>
<th>Case</th>
<th>hajó</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominative</td>
<td>hajó</td>
</tr>
<tr>
<td>Accusative</td>
<td>hajó-t</td>
</tr>
<tr>
<td>Inessive</td>
<td>hajó-ban</td>
</tr>
<tr>
<td>Elative</td>
<td>hajó-ból</td>
</tr>
<tr>
<td>Illative</td>
<td>hajó-ba</td>
</tr>
<tr>
<td>Superessive</td>
<td>hajó-n</td>
</tr>
<tr>
<td>Delative</td>
<td>hajó-ról</td>
</tr>
<tr>
<td>Sublative</td>
<td>hajó-ra</td>
</tr>
<tr>
<td>Adessive</td>
<td>hajó-nál</td>
</tr>
<tr>
<td>Ablative</td>
<td>hajó-tól</td>
</tr>
<tr>
<td>Allative</td>
<td>hajó-hoz</td>
</tr>
<tr>
<td>Terminative</td>
<td>hajó-ig</td>
</tr>
<tr>
<td>Dative</td>
<td>hajó-nak</td>
</tr>
<tr>
<td>Instrumental-Comitative</td>
<td>hajó-val</td>
</tr>
<tr>
<td>Formal</td>
<td>hajó-képp</td>
</tr>
<tr>
<td>Essive</td>
<td>hajó-ul</td>
</tr>
<tr>
<td>Essive-Formal-Similitive</td>
<td>hajó-ként</td>
</tr>
<tr>
<td>Translative-Factitive</td>
<td>hajó-vá</td>
</tr>
<tr>
<td>Causal-Final</td>
<td>hajó-ért</td>
</tr>
<tr>
<td>Distributive</td>
<td>hajó-nként</td>
</tr>
<tr>
<td>Sociative</td>
<td>hajó-stul</td>
</tr>
</tbody>
</table>

### Number of Cases

1. **2** cases in Old French.
2. **4** cases in Icelandic (horse).
3. **3** cases in Khanty (Ural; west Siberia) (xo:t - ‘house’).
4. **19** cases in Hungarian (hajó - ‘ship’).
5. **5** cases in Trumai, Brazil (child).
6. **6** cases in Russian (zavod – ‘factory’, karta – ‘map’).
Number of Cases

- No morphological case-marking: 100
- 2 case categories: 23
- 3 case categories: 9
- 4 case categories: 9
- 5 case categories: 12
- 6-7 case categories: 37
- 8-9 case categories: 23
- 10 or more case categories: 24

Total: 261
## Expression of Case

### Prefixes

<table>
<thead>
<tr>
<th>Krongo (centr. Afrika)</th>
</tr>
</thead>
<tbody>
<tr>
<td>àpá-ŋ</td>
</tr>
<tr>
<td>m.perf.hit-tr3sg.m</td>
</tr>
<tr>
<td>‘He hit him with a baton.’</td>
</tr>
</tbody>
</table>

### Tone

<table>
<thead>
<tr>
<th>Nandi (Kenya)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. kè:r-éy</td>
</tr>
<tr>
<td>look.at-impf</td>
</tr>
<tr>
<td>‘Kibet is looking at the child.’</td>
</tr>
</tbody>
</table>

b. kè:r-éy | kípe:t | kípro:no |
| look.at-impf | Kipet.nonsubj | Kiprono.subj |
| ‘Kiprono is looking at Kibet.’ |

### Proklitic

<table>
<thead>
<tr>
<th>Cayuvava (Bolivia)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ji=[ka'reeča</td>
</tr>
<tr>
<td>obl=[other</td>
</tr>
<tr>
<td>‘in another place’</td>
</tr>
</tbody>
</table>

### Enklitic

<table>
<thead>
<tr>
<th>Ungarinyinj (Australie)</th>
</tr>
</thead>
<tbody>
<tr>
<td>[dambun</td>
</tr>
<tr>
<td>[camp</td>
</tr>
<tr>
<td>‘at their camp’</td>
</tr>
</tbody>
</table>
• suffixes
• prefixes
• tones
• clitics
Differential Object Marking (DOM)

• In non-DOM languages, all direct objects are uniformly marked in the same way: a language could mark all direct objects with Acc (Czech); or leave all direct objects without overt marker (English).

• Direct objects are divided in two different classes, depending on different meanings

• Mostly, only one of the classes receives a marker, the other remains unmarked
  – or (like in Finnish) both types of objects are marked with different endings

• e.g. in Spanish, Persian, Turkish, Tamil, Hebrew
DOM - Examples

EVENKI uses -βα to case-mark definite objects, and -jə for indefinite objects.

Bii asii ɣ-βa ɣər-m. 1sg woman-ACC call-1sg 'I call the woman.' (p. 8)

Haspelmath (2018)

HASPIK
ja vstreča-ju dorog-ix gost-ej I receive-1sg dear-gen=acc pl guest-gen=acc pl
vs.
ja pokupaj-ju dorog-ije vešč-i I buy-1sg dear-nom=acc pl thing-nom=acc pl
“I receive dear guests / I buy expensive things”

Bulatova & Grenoble 1999: 8-9

Bossong (1991)

Usually, the nominal in patient role is inanimate and indefinite, so deviations from this usual association tend to be accusative-marked.

Haspelmath (2018)

SPANISH

a. Vi  la  casa.
   I.saw the house
   ‘I saw the house.’

b. Vi  a  la  mujer.
   I.saw ACC the woman
   ‘I saw the woman.’

Bashkir
hin  kitap-ti  uqî-yhîn
you book-ACC’ read-2sg

vs.

hin  kitap  uqî-yhîn
you book read-2sg
“You are reading the book/You are reading a (= any, some) book”

Bossong (1991)
DOM - Observations

animacy scale:

human noun --> animal noun --> inanimate noun

**Universal** *(Haspelmath 2018)*
The higher a referential type of noun is on the animacy scale, the more likely it is that it will have a special object marker, and the longer this marker will be.
Different marking of Patience

• Mark a P, high in animacy, i.e. the accusative case is restricted to Ps that are high in animacy

Viděl jsem chlapc-ě / ps-a / dub / stůl.
I saw the boy (A=Gen) / dog (A=Gen) / oak (A=N) / table (A=N)
‘I saw the boy/dog/oak/table’.

Widziałem chłopc-ów / dziewczyny / psy / dęby / stoły.
I saw the boys (A=Gen) / girls (A=N) dog (A=N) / oak (A=N) / table (A=N)
‘I saw the boys/girls/dogs/oaks/tables’.

• mark a P, high in definiteness, i.e. the accusative case is restricted to definite Ps,
• mark an A that is low in animacy, i.e. the ergative case is restricted to NPs that are low in animacy
Different marking of Patience

- mark a P, high in animacy, i.e. the accusative case is restricted to Ps that are high in animacy

- Mark a P, high in definiteness, i.e. the accusative case is restricted to definite Ps in Turkish, only definite direct objects take the special accusative suffix $\sim i$.

Hasan $öküz$ - ü bought
Hasan ox - ACCUSATIVE bought

‘Hasan bought the ox’.

Hasan $bir öküz$ bought
Hasan a ox bought

‘Hasan bought an ox’.

- mark an A that is low in animacy, i.e. the ergative case is restricted to NPs that are low in animacy
## Locative Cases

<table>
<thead>
<tr>
<th>basic localization</th>
<th>case</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN – inside</td>
<td>LOKATIVE=ESSIV E (where, LOC) We got engaged in Bremen.</td>
</tr>
<tr>
<td>APUD – near</td>
<td>ABLATIVE=ELATIVE (from where, DIR1) We went to Bamberg.</td>
</tr>
<tr>
<td>SUB – under</td>
<td>LATIVE=DIREKTIVE (to where, DIR3) She came from Aachen.</td>
</tr>
<tr>
<td>SUPER – over</td>
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<td>POST – behind</td>
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<td>AD – on surface</td>
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<tr>
<td>ULTRA – far from</td>
<td></td>
</tr>
</tbody>
</table>

**combinations in Hungarian**
- Inessive
- Elative
- Illative
- Superessive
- Delative
- Sublative
- Adessive
- Ablative
- Allative
Differential Place Marking (DPM)

Maltese
a. *Jgħallem* *Għawdex.*
   3SG.M.IMPFV.teach Gozo
   ‘He teaches on Gozo (an island).’

b. *Jgħallem* *f-l-iskjel ta-l-Gvern.*
   3SG.M.IMPFV.teach in-DEF-schools of-DEF-government
   ‘He teaches in the schools of the government.’

Martinican Creole (Zribi-Hertz & Jean-Louis 2018)
a. *Mèl-la an pièbwa-a.* (p. 158)
   blackbird-DEF in tree-DEF
   ‘The blackbird is in the tree.’

b. *Pòl Fòdfrans* (p. 161)
   Paul Fort-de-France
   ‘Paul is in Fort-de-France.’

Swahili (Bentley 1998: 188)
   3sg-PRS-go house-LOC
   ‘He is going home.’

   3SG-PRS-go Dar es Salaam
   ‘He is going to Dar es Salaam.’

Modern Eastern Armenian (Creissels & Mounole 2011: 164)
a. *Aprum em ays pʰovoc-um*
   living I.am this street-LOC
   ‘I live on this street.’

b. *Aprum em Yerevan(-um).*
   living I.am Yerevan-(LOC)
   ‘I live in Yerevan.’
Differential Place Marking (DPM)

- In French, street names are systematically zero-marked (Stolz et al. 2014).

  a. *On se rencontre dans le parc.*
  
  b. *On se rencontre Rue Molière.*

  ‘We meet in the parc.’

  ‘We meet in Rue Molière.’

- Contrasts between shorter and longer forms
  - In all cases, the shorter forms are used for place names and the longer forms are used for common nouns. (Haspelmath, 2018)

<table>
<thead>
<tr>
<th>Latin</th>
<th>3) Basque (Creissels &amp; Mounole 2011: 168-169)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>in campo</em></td>
<td>a. <em>mendi-tan</em> ‘on the mountain’</td>
</tr>
<tr>
<td><em>Roma-e</em></td>
<td>b. <em>Bilbo-n</em> ‘in Bilbao’</td>
</tr>
<tr>
<td></td>
<td>(not <em>in Roma)</em></td>
</tr>
</tbody>
</table>
Observations on DPM

**Universal** *(Haspelmath 2018)*

If a language has asymmetric differential coding of place in common nouns and place names, the place-name marker will be shorter.

“If, in a given language, constructions which function as spatial adverbial adjuncts or complements of a given head (noun or verb) differ in terms of their morphosyntactic complexity [measured in terms of the number of units (= words, morphs)], then those constructions which involve a toponym are less complex than those which involve a common noun.” *(Stolz et al., 2017)*
Differential PLACE marking: toponyms ↔ inanimates ↔ humans

- In Basque, a special marker -\textit{gan} occurs with animate nouns in the locative, ablative and allative cases. Thus, the marking of place relations with human landmarks requires more segments. (Creissels & Mounole, 2011)

\begin{align*}
\text{(16)} & \quad \text{‘Bilbao’} & \text{‘the mountain’} & \text{‘the boy’} \\
\text{locative} & \quad \text{Bilbo-}n & \text{mendi-}an & \text{mutila-}ga-n \\
\text{ablative} & \quad \text{Bilbo-}tik & \text{mendi-}tik & \text{mutila-}gan-dik \\
\text{allative} & \quad \text{Bilbo-}ra & \text{mendi-}ra & \text{mutila-}gan-a
\end{align*}

- In Italian, inanimate nouns (and toponyms) take the allative preposition \textit{a+}, while animate nouns require \textit{da+} (Luraghi 2011: 220).

\begin{align*}
a. \quad \text{vado a-lla scuola} & / \quad \text{vado a Parigi} \\
& \quad \text{I go to the school} & \quad \text{I go to Paris} \\
& \quad \text{‘I go to the school.’} & \quad \text{‘I go to Paris.’} \\

b. \quad \text{Vado da-l poliziotto.} \\
& \quad \text{I go to the policeman} \\
& \quad \text{‘I go to the policeman.’}
\end{align*}

Luraghi (2011) : the marker for human landmarks is unstable and rather different across Romance languages (Latin \textit{apud}, French \textit{chez}, colloquial Spanish \textit{donde}), but always longer than the marker for inanimate landmarks.
Differential Place marking:

- Special marking of human landmarks is even more common than different treatment of place names, but it is not often noted, because we do not expect humans to be landmarks of ordinary spatial relations for semantic reasons.

**Universal** *(Haspelmath 2018)*

If a language has asymmetric differential coding of place in inanimate nouns and human nouns, the inanimate-noun marker will be shorter.

**Finnish** *(Kittilä et al. 2011)*

- *Kirja on pöydä-n päällä / pöydä-llä.*
  - book is table-GEN on table-ADE
  - ‘The book is on the table.’

- *Kirja on lapse-n päällä / *lapse-lla.*
  - book is child-gen on child-ADE
  - ‘The book is on the child.’
Differential Place marking:

**toponym ↔ inanimates ↔ humans**

topo-nouns

‘(one’s) house’, ‘village’, ‘school’, ‘church’, ‘beach’

- Languages sometimes give special treatment to a diverse set of nouns that denote concepts which are commonly used as spatial landmarks
  
  a. Latin
     
     *domi* ‘at home’, *humi* ‘on the ground’, *ruri* ‘in the countryside’,
     
     *terrae* ‘on the land’
  
  b. Ancient Greek (Luraghi 2017: 126)
     
     *dómōi* ‘at home’, *póntoi* ‘on the sea’, *agrōi* ‘in the field’, *khérsōi* ‘on the dry land’

- spatial-reference scale

  human noun > common inanimate noun > topo-noun > place name

**Universal (Haspelmath 2018)**
The higher a referential type of noun is on the spatial-reference scale, the more likely it is that it will have a place marker, and the longer this marker will be.
Conclusions

- Both differential object marking and differential place marking are special cases of a more general regularity.
- It is efficient for a grammatical system to have special and longer grammatical markers for unusual situations. (Haspelmath, 2018)

**Generalized Universal**

Deviations from usual associations of role meanings and properties of referring expressions tend to be coded by longer grammatical forms.
References


• Haspelmath, M. 2018 (2019). Differential place marking and differential object marking


• Masayoshi Shibatani. Linguistic Typology, 2015, Rice University, Houston, TX, USA


• Stolz, Thomas, Nataliya Levkovych & Aina Urdze. 2017. When zero is just enough … In support of a Special Toponymic Grammar in Maltese. Folia Linguistica 51(2). 453–482.
References

Online resources

- The resources page of the *Association for Linguistic Typology*: Retrieved on 09/-3/2014 from [http://www.linguistic-typology.org/resources.html](http://www.linguistic-typology.org/resources.html)
- The *Universals Archive*: Retrieved on 09/03/2014 from [http://typo.uni-konstanz.de/archive/](http://typo.uni-konstanz.de/archive/)